

ARTICLE 34

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CLAIMS:

1. A method of manufacturing consumable or dissolvable tablets, comprising:

5 supplying a liquid containing a biodissolvable carrier along a supply tube to an outlet of the tube;

10 establishing an electric field between the outlet and a support surface spaced from the outlet to cause liquid issuing from the outlet to form at least one fibre or fibrils of the biodissolvable carrier which fibre or fibrils deposit(s) onto the support surface to form a fibre web or mat;

15 separating the web or mat into a plurality of individual tablets; and

incorporating at least one active ingredient in and/or the tablets.

2. A method according to claim 1, which comprising:

20 separating the web or mat into a plurality of individual tablets by cutting the web or mat.

3. A method of manufacturing tablets, comprising:

25 supplying through a supply tube to an outlet a liquid containing a hydrophilic biologically compatible carrier;

establishing an electric field between the outlet and a support surface spaced from the outlet to cause liquid issuing from the outlet to form at least one fibre or fibrils of the carrier;

30 causing the at least one fibre or fibrils to deposit onto the support surface to form a plurality of individual tablets each comprising a fibre web or mat which melts or liquifies on contact with a wet surface; and

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providing the tablets with at least one active ingredient.

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- 5 4. A method according to any one of the proceeding claims, which comprises supplying to provide the liquid a composition comprising at least one of a gelatin, starch, cellulose, a cellulose derivative, a water-soluble polymer such as polyvinyl pyrrolidone, polyvinyl alcohol, poly-sucrose, a sugar.
- 10 5. A method according to any one of claims 1 to 3, which comprises supplying as the liquid a solution consisting essentially of 5 grams of fish gelatin in a solvent consisting of from 7 to 9 millilitres of water and 10 to 11 millilitres of ethanol.
- 15 6. A method according to any one of claims 1 to 3, which comprises supplying as the liquid a solution consisting essentially of 5 grams of fish gelatin in a solvent consisting of 8 millilitres of water, 10 millilitres of ethanol and 1 millilitre of peppermint flavouring.
- 20 7. A method according to any one of the preceding claims, which comprising providing an air flow to encourage the deposition of the at least one fibre or fibrils on the surface.
- 25 8. A method according to any one of the preceding claims, which further comprises regulating the temperature, for example by applying heat, of the region where the liquid issues from the outlet to facilitate the formation of the at least one fibre or fibrils.
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9. A method according to any one of the preceding claims, which comprises establishing the electric field by applying a high voltage to the surface.

- 5 10. A method of manufacturing tablets, comprising:
supplying a liquid consisting essentially of a hydrophilic solution of gelatin through a liquid supply tube to an outlet of the tube;
establishing an electric field between the outlet
10 and a support surface spaced from the outlet to cause liquid issuing from the outlet to form on the support surface a web or mat consisting of at least one gelatin fibre or gelatin fibrils;
separating the web or mat into a plurality of
15 individual tablets; and
incorporating at least one active ingredient and a sweetener such as saccharine into and/or on the tablets.

20 11. A method according to any one of the preceding claims, which comprises using as the surface a rotatable endless surface such as a belt.

25 12. A method according to any one of the preceding claims, which comprises incorporating the at least one active ingredient by spraying the active ingredient onto at least one of: the at least one fibre or fibrils; the mat or web; and the individual tablets.

30 13. A method according to any one of the preceding claims, which comprises incorporating the active ingredient into the at least one fibre or fibrils.

35 14. A method according to any one of the preceding claims, which comprises forming the at least one fibre or fibrils with a core containing an active ingredient.

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15. A method of manufacturing a pharmaceutical product which comprises using a method in accordance with any one of the preceding claims and providing as the at least one active ingredient an ingredient which is pharmacologically or biologically active.

16. A method of manufacturing a confectionary product which comprises using a method in accordance with any one of claims 1 to 14 to form a plurality of individual tablets and incorporating as the at least one active ingredient at least one of the following: sugar; chocolate; a flavouring; and a colorant.

17. Apparatus for manufacturing consumable or dissolvable tablets, comprising:

means for supplying a liquid containing a biodissolvable carrier through a liquid supply tube to an outlet of the tube;

means for establishing an electric field between the outlet and a support surface spaced from the outlet to cause liquid issuing from the outlet to form at least one fibre or fibrils of the biodissolvable carrier which deposit(s) onto the support surface to form a fibre web or mat;

means for separating the web or mat into a plurality of individual tablets; and

means for incorporating at least one active ingredient in the tablet.

18. Apparatus according to claim 15, wherein the separating means comprises at least one cutter.

19. Apparatus for manufacturing consumable or dissolvable tablets, comprising:

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means for supplying a liquid containing a biodissolvable carrier through a liquid supply tube to an outlet of the tube;

5 means for establishing an electric field between the outlet and a support surface spaced from the outlet to cause liquid issuing from the outlet to form at least one fibre or fibrils of the biodissolvable carrier;

10 means for causing the fibre or fibrils to deposit onto the support surface to form a plurality of individual tablets each comprising a fibre web or mat; and

means for incorporating at least one active ingredient into the web or mat.

15 20. Apparatus according to claim 17, 18 or 19, further comprising, for providing the liquid, a supply of a gelatin, starch, cellulose, a cellulose derivative, a water soluble polymer such as polyvinyl pyrrolidone, polyvinyl alcohol, poly-sucrose, a sugar.

20 21. Apparatus according to any one of claims 17 to 19, further comprising, as the liquid, a supply of a solution consisting essentially of 5 grams of gelatin in 7 to 9 millilitres of water and 10 to 11 millilitres of ethanol.

25 22. Apparatus according to any one of claims 17 to 19, further comprising, as the liquid, a supply of a solution consisting essentially of 5 grams of gelatin in 8 millilitres of water, 10 millilitres of ethanol and 1 millilitre of peppermint flavouring.

30 23. Apparatus according to any one of claims 17 to 22, further comprising air flow causing means for facilitating the deposition of the at least one fibre or fibrils onto the support.

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24. Apparatus according to any one of claims 17 to 23, wherein the electric field establishing means comprises means for applying a positive potential to the support.

5 25. Apparatus according to any one of claims 17 to 24, further comprising a rotatable endless surface as the support.

10 26. Apparatus according to any one of claims 17 to 25, further comprising an environmental control means for regulating the temperature of the region where liquid issues from the outlet.

15 27. Apparatus according to any one of claims 17 to 26, further comprising spraying means for spraying the at least one active ingredient onto at least one of: the fibre or fibrils; the mat or web; and individual tablets.

20 28. Apparatus according to any one of claims 17 to 27, further comprising means for supplying the active ingredient so that the at least one fibre or fibrils have a core containing the active ingredient.

25 29. A consumable or dissolvable tablet, pad or mat manufactured using a method in accordance with any one of claims 1 to 16 or apparatus in accordance with any one of claims 17 to 28.

30 30. A consumable or dissolvable tablet produced by subjecting liquid comprising the carrier material to a high electric field and comprising a web of fibres of a biodissolvable carrier material carrying at least one active ingredient, the carrier material being arranged to dissolve or disintegrate in a wet environment such as on

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the tongue or in the mouth of a human being or other animal.

31. A consumable or dissolvable tablet comprising a web of fibres or fibrils of gelatin produced by subjecting liquid comprising gelatin to a high electric field and carrying at least one active ingredient, the tablet being arranged to dissolve or disintegrate in a wet environment such as on the tongue or in the mouth of a human being or other animal.

32. A tablet according to claims 29, 30 or 31, wherein the active ingredient comprises a pharmacologically or biologically active ingredient.

33. Use of electrohydrodynamic comminution to produce a consumable or dissolvable tablet.